

April 20, 1990

Docket Nos. 50-275
and 50-323

Mr. J. D. Shiffer, Vice President
Nuclear Power Generation
c/o Nuclear Power Generation, Licensing
Pacific Gas and Electric Company
77 Beale Street, Room 1451
San Francisco, California 94106

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Dear Mr. Shiffer:

SUBJECT: ISSUANCE OF AMENDMENTS (TAC NOS. 76394 AND 76395)

The Commission has issued the enclosed Amendment No. 52 to Facility Operating License No. DPR-80 and Amendment No. 51 to Facility Operating License No. DPR-82 for the Diablo Canyon Power Plant (DCPP), Units 1 and 2, respectively. The amendments change the Diablo Canyon combined Technical Specifications (TS) in response to your application for license amendments dated March 14, 1990 (Reference LAR 90-04). The amendments revise the TS to change the scheduled date for removal of the Boron Injection Tank (BIT) from Diablo Canyon Unit 2. Specifically, the change will require the previously approved BIT removal to be implemented at the fourth refueling outage for both units. The previous TS required the BIT removal to be implemented at the third refueling outage for Diablo Canyon Unit 2 and the fourth refueling outage for Unit 1.

A copy of the related Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

ORIGINAL SIGNED BY H. ROOD

Harry Rood, Senior Project Manager
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects Office of
Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 52 to DPR-80
2. Amendment No. 51 to DPR-82
3. Safety Evaluation

cc w/enclosures:

See next page

DRSP/PD5
PShea
4/13/90

DRSP/PD
HRood
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OGC
4/19/90

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

April 20, 1990

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A copy of the related Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

A handwritten signature in cursive script that reads "Harry Rood".

Harry Rood, Senior Project Manager
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects Office of
Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 52 to DPR-80
2. Amendment No. 51 to DPR-82
3. Safety Evaluation

cc w/enclosures:
See next page

Mr. J. D. Shiffer
Pacific Gas and Electric Company

Diablo Canyon

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON NUCLEAR POWER PLANT, UNIT 1
DOCKET NO. 50-275
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 52
License No. DPR-80

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Pacific Gas & Electric Company (the licensee), dated March 14, 1990, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-80 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 52, are hereby incorporated in the license. Pacific Gas & Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment becomes effective at the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Roby Bevan, Acting Director
Project Directorate V
Division of Reactor Projects III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 20, 1990



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON NUCLEAR POWER PLANT, UNIT 2
DOCKET NO. 50-323
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 51
License No. DPR-82

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Pacific Gas & Electric Company (the licensee), dated March 14, 1990, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-82 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 51, are hereby incorporated in the license. Pacific Gas & Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment becomes effective at the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Roby Bevan, Acting Director
Project Directorate V
Division of Reactor Projects III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 20, 1990

ATTACHMENT TO LICENSE AMENDMENT NOS. 52 AND 51
FACILITY OPERATING LICENSE NOS. DPR-80 and DPR-82
DOCKET NOS. 50-275 AND 50-323

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change. Overleaf pages are also included, as appropriate.

Remove Page

3/4 3-31
3/4 5-9
3/4 5-10
B 3/4 5-2

Insert Page

3/4 3-31
3/4 5-9
3/4 5-10
B 3/4 5-2

TABLE 3.3-5 (Continued)

TABLE NOTATIONS

- (1) Diesel generator starting delay not included because offsite power available.
- (2) Feedwater System overall response time shall include verification of each individual Feedwater System valve closure time as shown below:

<u>Valve</u>	<u>Closure Time (not including instrumentation delays)</u>
FCV-438	< 60 seconds
439	< 60 seconds
440	< 60 seconds
441	< 60 seconds
510	< 5 seconds
520	< 5 seconds
530	< 5 seconds
540	< 5 seconds
1510	< 5 seconds
1520	< 5 seconds
1530	< 5 seconds
1540	< 5 seconds

- (3) Diesel generator starting and loading delays included.
- (4) Diesel generator starting delay not included because offsite power is available. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps (where applicable). Sequential transfer of charging pump suction from the VCT to the RWST (RWST valves open, then VCT valves close) is included.

For Units 1 and 2 Cycle 4, the Safety Injection response time limit shall be as follows:

Pressurizer Pressure-Low	< 12
Differential Pressure Between Steam Lines-High	< 13
Steam Flow in Two Steam Lines-High Coincident with T _{avg} -Low-Low	< 15
Steam Flow in Two Steam Lines-High Coincident with Steam Line Pressure-Low	< 13

Diesel generator starting delay not included because offsite power is available. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps (where applicable).

- (5) Diesel generator starting and sequence loading delays included. Offsite power is not available. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps. Sequential transfer of charging pump suction from the VCT to the RWST (RWST valves open, then VCT valves close) is included.

TABLE 3.3-5 (Continued)

TABLE NOTATIONS

For Units 1 and 2 Cycle 4, the Safety Injection response time limit shall be as follows:

Differential Pressure Between Steam Lines-High	≤ 23
Steam Flow in Two Steam Lines-High Coincident with T _{avg} -Low-Low	≤ 25
Steam Flow ^{avg} in Two Steam Lines-High Coincident with Steam Line Pressure-Low	≤ 23

Diesel generator starting and sequence loading delays included. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps (where applicable).

- (6) The maximum response time of 48.5 seconds is the time from when the containment pressure exceeds the High-High Setpoint until the spray pump is started and the discharge valve travels to the fully open position assuming off-site power is not available. The time of 48.5 seconds includes the 28-second maximum delay related to ESF loading sequence. Spray riser piping fill time is not included. The 80-second maximum spray delay time does not include the time from LOCA start to "P" signal.
- (7) Diesel generator starting and sequence loading delays included. Sequential transfer of charging pump suction from the VCT to the RWST (RWST valves open, then VCT valves close) is not included. Response time limit includes opening of valves to establish SI flow path and attainment of discharge pressure for centrifugal charging pumps, SI, and RHR pumps (where applicable).

EMERGENCY CORE COOLING SYSTEMS

3/4.5.4 BORON INJECTION SYSTEM

BORON INJECTION TANK

LIMITING CONDITION FOR OPERATION

3.5.4.1 The boron injection tank shall be OPERABLE with:

- a. A minimum contained borated water volume of 900 gallons of borated water,
- b. A boron concentration of between 20,000 and 22,500 ppm, and
- c. A minimum solution temperature of 145°F.

APPLICABILITY: MODES 1, 2 and 3. For Units 1 and 2 Cycle 4.

ACTION:

With the boron injection tank inoperable, restore the tank to OPERABLE status within 1 hour or be in HOT STANDBY and borated to a SHUTDOWN MARGIN equivalent to 1% $\Delta k/k$ at 200°F within the next 6 hours; restore the tank to OPERABLE status within the next 7 days or be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.5.4.1 The boron injection tank shall be demonstrated OPERABLE by:

- a. Verifying the contained borated water volume through a recirculation flow test at least once per 7 days,
- b. Verifying the boron concentration of the water in the tank at least once per 7 days, and
- c. Verifying the water temperature at least once per 24 hours.

EMERGENCY CORE COOLING SYSTEMS

HEAT TRACING

LIMITING CONDITION FOR OPERATION

3.5.4.2 At least two independent channels of heat tracing shall be OPERABLE for the boron injection tank and for the heat traced portions of the associated flow paths.

APPLICABILITY: MODES 1, 2 and 3. For Units 1 and 2 Cycle 4.

ACTION:

With only one channel of heat tracing on either the boron injection tank or on the heat traced portion of an associated flow path OPERABLE, operation may continue for up to 30 days provided the tank and flow path temperatures are verified to be greater than or equal to 145°F at least once per 8 hours; otherwise, be in HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.5.4.2 Each heat tracing channel for the boron injection tank and associated flow path shall be demonstrated OPERABLE:

- a. At least once per 31 days by energizing each heat tracing channel, and
- b. At least once per 24 hours by verifying the tank and flow path temperatures to be greater than or equal to 145°F. The tank temperature shall be determined by measurement. The flow path temperature shall be determined by either measurement or recirculation flow until establishment of equilibrium temperatures within the tank.

EMERGENCY CORE COOLING SYSTEMS

BASES

ECCS SUBSYSTEMS (Continued)

The requirement to maintain the RHR Suction Valves 8701 and 8702 in the locked closed condition in MODES 1, 2 and 3 provides assurance that a fire could not cause inadvertent opening of these valves when the RCS is pressurized to near operating pressure. These valves are not part of an ECCS subsystem.

The limitation for a maximum of one centrifugal charging pump to be OPERABLE and the Surveillance Requirement to verify all centrifugal charging pumps and Safety Injection pumps except the required OPERABLE charging pump to be inoperable below 323°F provides assurance that a mass addition pressure transient can be relieved by the operation of a single PORV.

The Surveillance Requirements provided to ensure OPERABILITY of each component ensures that, at a minimum, the assumptions used in the safety analyses are met and that subsystem OPERABILITY is maintained. Surveillance requirements for throttle valve position stops and flow balance testing provide assurance that proper ECCS flows will be maintained in the event of a LOCA. Maintenance of proper flow resistance and pressure drop in the piping system to each injection point is necessary to: (1) prevent total pump flow from exceeding runout conditions when the system is in its minimum resistance configuration, (2) provide the proper flow split between injection points in accordance with the assumptions used in the ECCS-LOCA analyses, and (3) provide an acceptable level of total ECCS flow to all injection points equal to or above that assumed in the ECCS-LOCA analyses.

3/4.5.4 BORON INJECTION SYSTEM

The Boron Injection System is only required for Units 1 and 2 Cycle 4. The OPERABILITY of the Boron Injection System as part of the ECCS ensures that sufficient negative reactivity is injected into the core to counteract any positive increase in reactivity caused by RCS cooldown. RCS cooldown can be caused by inadvertent depressurization, a loss-of-coolant accident or a steam line rupture.

The limits on injection tank minimum contained volume and boron concentration ensure that the assumptions used in the steam line break analysis are met. The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.

The OPERABILITY of the redundant heat tracing channels associated with the boron injection system ensure that the solubility of the boron solution will be maintained above the solubility limit of 135°F at 21,000 ppm boron.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 52 TO FACILITY OPERATING LICENSE NO. DPR-80
AND AMENDMENT NO. 51 TO FACILITY OPERATING LICENSE NO. DPR-82
PACIFIC GAS AND ELECTRIC COMPANY
DIABLO CANYON NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2
DOCKET NO. 50-275 AND 50-323

1.0 INTRODUCTION

By letter dated March 14, 1990 (Reference LAR 90-04), Pacific Gas and Electric Company (PG&E or the licensee) requested amendments to the combined Technical Specifications (TS) appended to Facility Operating License Nos. DPR-80 and DPR-82 for the Diablo Canyon Power Plant (DCPP), Unit Nos. 1 and 2, respectively. The amendments change the TS to change the scheduled date for removal of the Boron Injection Tank (BIT) from Diablo Canyon Unit 2. Specifically, the change will require the previously approved BIT removal to be implemented at the fourth refueling outage for both units. The previous TS required the BIT removal to be implemented at the third refueling outage for Diablo Canyon Unit 2 and the fourth refueling outage for Unit 1.

The staff evaluation of these changes is given below and is based on the licensee's letter of March 14, 1990. The staff's proposed determination of no significant hazards consideration for these amendments was published in the Federal Register on March 20, 1990 at 55 FR 10332.

2.0 EVALUATION

The NRC staff has evaluated the proposed changes and finds them acceptable, based on the analyses and evaluations given by the licensee. A discussion of each of the specific technical specification changes made by these amendments is presented below.

The removal of the BIT from each unit at Diablo Canyon was previously authorized by Amendment No. 51 to Facility Operating License No. DPR-82, for Unit 1 and Amendment No. 50 to Facility Operating License No. DPR-82, for Unit 2. These amendments were issued on February 26, 1990, and authorized the BIT removal to be implemented at the third refueling outage for Unit 2 and the fourth refueling outage for Unit 1.

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Subsequent to the issuance of these amendments, the licensee determined that the implementation of the BIT removal during the third refueling outage for Unit 2 (which began on March 4, 1990) was impractical, due to the necessity to conduct environmental qualification upgrading of certain valve motor operator parts. These components are exposed to a harsh environment in the event of a main steam line break, and removal of the BIT will make this environment more severe, thereby necessitating the upgrading of the environmental qualification of all components not previously qualified for the more severe environment. While most components have been qualified for the more severe environment, the licensee discovered, after Amendments 51 and 50 were issued, that several valves had not been qualified for the new accident environment. To allow more time to upgrade the qualification of the valve motor operators, and avoid the possibility of delay of restart in the event that the upgrading could not be completed by the end of the outage, the licensee requested that the BIT removal for Unit 2 be delayed for one cycle, from the third to the fourth refueling outage.

In addition to changing the implementation date of BIT removal, these amendments change notations to TS Table 3.3-5 to more clearly define the Safety Injection response time limits that apply before and after BIT removal. Specifically, the notation changes provide additional details of the safety injection system response time limits. Neither the change of implementation date of BIT removal nor the change to clarify the response time limit definition will change the previously approved plant safety analyses and the associated environmental analyses, either before or after removal of the BIT. Further, the licensee has inspected the Unit 2 BIT and has found that it is acceptable for continued operation for the additional cycle allowed by these amendments. The NRC staff has reviewed the rationale for the changes proposed by the licensee and finds them acceptable, because the delay in implementation of the BIT represents a change from one previously approved plant configuration to another previously approved configuration, and there is no reduction in plant safety that would result from the delay. Further, the additional clarification of the safety injection response times does not change the limits themselves, but rather, reduces the possibility of the plant operators misunderstanding the limits or the surveillance tests used to verify the limits.

In summary, the NRC staff has reviewed the request by the Pacific Gas and Electric Company to modify the combined Technical Specifications for Diablo Canyon Units 1 and 2 to change the implementation date for removal of the BIT for Unit 2 from the third refueling outage to the fourth refueling outage, and to clarify the response time limits, and finds it acceptable, for the reasons given above.

3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve changes to a requirement with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20 and a change in surveillance requirements. At Diablo Canyon, the restricted area coincides with the site boundary. We have determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of these amendments.

4.0 CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and (3) the issuance of these amendments will not be inimical to the common defense and security or the health and safety of the public.

Principal Contributor: Harry Rood

Dated: April 20, 1990